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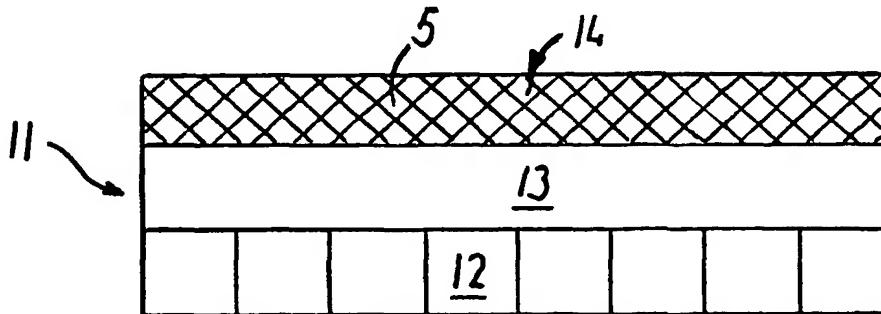
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(88) Date of publication of the international search report: 8 July 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF TREATING A SURFACE, COATING COMPOSITIONS AND USE THEREOF AND COATED SURFACES OBTAINABLE BY THE USE



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(57) Abstract: A method of treating a surface comprising the steps of providing a coating composition comprising particles of a polyolefin wax or of a mixture of polyolefin waxes suspended in a liquid phase; applying said coating composition to the surface; evaporating said liquid phase from the applied coating composition; and subjecting said dried, applied coating composition to a heating treatment to coalesce said wax particles.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/DK 03/00499

A. CLASSIFICATION OF SUBJECT MATTER		C09D191/06 C09D5/00		C09D5/08 C09D5/16		C09D123/00	
IPC 7		C09D127/18	B05D5/00	B05D7/00	B05D7/04	C08J7/04	
		B32B27/16	B32B27/32				

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C09D B05D C08J B32B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

WPI Data, EP0-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 228 932 B1 (SAITO TAKUMI) 8 May 2001 (2001-05-08) column 2, line 14 - line 19 column 10, line 6 - line 14; claim 1 ---	1-57,59
X	US 6 033 736 A (BLACK ROBERT ET AL) 7 March 2000 (2000-03-07) column 4, line 17 - line 39; claim 1 ---	1-52,57
X	DE 197 43 566 A (MORTON INT GMBH) 15 April 1999 (1999-04-15) claim 1 ---	1-52,57, 58
X	FR 2 683 540 A (CASCO NOBEL FRANCE) 14 May 1993 (1993-05-14) claim 1 ---	1-52,57, 58
		-/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the International search

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INTERNATIONAL SEARCH REPORT

International Application No

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C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 387 434 A (BLACK ROBERT H) 7 February 1995 (1995-02-07) abstract ---	1-58
X	EP 0 798 349 A (NEUMANN BERND) 1 October 1997 (1997-10-01) abstract ---	1-52,57, 58
X	US 5 746 812 A (WEISS STEFAN ET AL) 5 May 1998 (1998-05-05) abstract ---	1-52,57, 59
A	---	63-92
X	US 4 693 909 A (VAMVAKARIS CHRISTOS ET AL) 15 September 1987 (1987-09-15) abstract ---	1-52,57, 59
X	GB 1 220 244 A (FARBWERKE HOECHST AKTIENGESELLSCHAFT) 20 January 1971 (1971-01-20) claim 1 ---	1-52,57, 59
X	DATABASE WPI Section Ch, Week 197732 Derwent Publications Ltd., London, GB; Class A82, AN 1977-56430Y XP002261556 & JP 52 076339 A (SAIDEN CHEMICAL KK), 27 June 1977 (1977-06-27) abstract ---	1-52,57, 59,60
A	FR 2 157 074 A (BERQUE THIERRY) 1 June 1973 (1973-06-01) claim 1 ---	1-52,60
A	US 4 895 881 A (BIGNER CHRISTIAN) 23 January 1990 (1990-01-23) claim 1 ---	1-52,60
A	WO 94 29395 A (DU PONT ;MITSUI DU PONT FLUORCHEMICAL (JP)) 22 December 1994 (1994-12-22) page 2, line 4 -page 3, line 7; claims 1-3 ---	63-92
A	EP 1 186 643 A (MITSUBISHI POLYESTER FILM LLC) 13 March 2002 (2002-03-13) claims 1-10,42 abstract ---	63-92
		-/-

INTERNATIONAL SEARCH REPORT

International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>DATABASE WPI Section Ch, Week 199639 Derwent Publications Ltd., London, GB; Class A82, AN 1996-387910 XP002277982 & JP 08 187818 A (NIPPON LIGHT METAL CO), 23 July 1996 (1996-07-23) abstract</p> <p>---</p>	63-92
A	<p>DATABASE WPI Section Ch, Week 198622 Derwent Publications Ltd., London, GB; Class A14, AN 1986-140132 XP002277986 & JP 61 074678 A (SANSUI DENKI KK), 16 April 1986 (1986-04-16) abstract</p> <p>-----</p>	63-92

INTERNATIONAL SEARCH REPORT

International Application No

PCT/DK 03/00499

Patent document cited in search report	Publication date		Patent family member(s)		Publication date
US 6228932	B1	08-05-2001	JP 2000080329 A JP 11241045 A AU 2180099 A BR 9815344 A EP 1098941 A2 WO 9932565 A2 TW 505659 B CN 1302317 T TR 200001939 T2		21-03-2000 07-09-1999 12-07-1999 09-10-2001 16-05-2001 01-07-1999 11-10-2002 04-07-2001 21-12-2000
US 6033736	A	07-03-2000	AU 4705299 A CA 2336779 A1 EP 1098939 A1 WO 0000556 A1		17-01-2000 06-01-2000 16-05-2001 06-01-2000
DE 19743566	A	15-04-1999	DE 19743566 A1		15-04-1999
FR 2683540	A	14-05-1993	FR 2683540 A1		14-05-1993
US 5387434	A	07-02-1995	NONE		
EP 0798349	A	01-10-1997	DE 19611690 A1 AT 221560 T DE 59707827 D1 DK 798349 T3 EP 0798349 A2 ES 2180838 T3 PT 798349 T		02-10-1997 15-08-2002 05-09-2002 18-11-2002 01-10-1997 16-02-2003 31-12-2002
US 5746812	A	05-05-1998	DE 4330342 A1 AT 167209 T CN 1133055 A DE 59406233 D1 WO 9507313 A1 EP 0717758 A1 JP 9502216 T		09-03-1995 15-06-1998 09-10-1996 16-07-1998 16-03-1995 26-06-1996 04-03-1997
US 4693909	A	15-09-1987	DE 3512564 A1 EP 0201702 A2 JP 61233066 A		16-10-1986 20-11-1986 17-10-1986
GB 1220244	A	20-01-1971	DE 1669155 A1 FR 1577862 A JP 48039334 B		17-09-1970 08-08-1969 22-11-1973
JP 52076339	A	27-06-1977	NONE		
FR 2157074	A	01-06-1973	FR 2157074 A5		01-06-1973
US 4895881	A	23-01-1990	SE 434517 B DE 2752773 A1 DK 131192 A DK 521977 A FI 773558 A FI 91534 B FR 2362905 A1 GB 1598092 A GB 1598091 A		30-07-1984 01-06-1978 27-10-1992 26-05-1978 26-05-1978 31-03-1994 24-03-1978 16-09-1981 16-09-1981

INTERNATIONAL SEARCH REPORT

International Application No

PCT/DK 03/00499

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 4895881	A	HK	32483 A	02-09-1983
		HK	32583 A	02-09-1983
		JP	1340327 C	29-09-1986
		JP	53086731 A	31-07-1978
		JP	61002708 B	27-01-1986
		NO	774025 A	26-05-1978
		NO	882492 A ,B,	26-05-1978
		SE	7613245 A	26-05-1978
		SE	8403047 A	07-12-1985
		SG	15683 G	11-01-1985
		SG	15783 G	11-01-1985
WO 9429395	A 22-12-1994	JP	3340798 B2	05-11-2002
		JP	6346017 A	20-12-1994
		DE	69410295 D1	18-06-1998
		DE	69410295 T2	07-01-1999
		EP	0738304 A1	23-10-1996
		WO	9429395 A1	22-12-1994
		US	5502097 A	26-03-1996
EP 1186643	A 13-03-2002	EP	1186643 A1	13-03-2002
		JP	2002188040 A	05-07-2002
		US	2002058758 A1	16-05-2002
		JP	2002226765 A	14-08-2002
JP 8187818	A 23-07-1996	NONE		
JP 61074678	A 16-04-1986	NONE		

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-62

1.1. Claims: 1-52, 53-56, 57-58, 61-62

Method of protecting a surface against graffiti according to claims 1-52 (a coating composition), claims 53-56 (method of treating a surface), claims 57-58 (use of the coating for anti-graffiti coating) and claims 61-62 (an article with a surface obtainable by the method according to claims 53-56).

1.2. Claims: 1-52, 53-56, 57, 59, 61-62

Method of protecting a surface against pollution and corrosion according to claims 1-52 (a coating composition), claims 53-56 (method of treating a surface), claims 57, 59 (use of the coating for protecting against pollution and corrosion) and claims 61-62 (an article with a surface obtainable by the method according to claims 53-56).

1.3. Claims: 1-52, 53-56, 57, 60, 61-62

Method of protecting a surface against fouling according to claims 1-52 (a coating composition), claims 53-56 (method of treating a surface), claims 57, 60 (use of the coating for anti-fouling coating) and claims 61-62 (an article with a surface obtainable by the method according to claims 53-56).

2. Claims: 63-72, 73-76

Method of providing a coated sheet according to claims 63-72 (a method of treating a sheet) and claims 73-76 (an article comprising the sheet).

3. Claims: 77-92

3.1 Method of protecting a structure against graffiti according to claims 77-78 (a structure covered with the article according to claim 73), claim 79 (use of the article for providing a surface with anti-graffiti coating), claim 81-88 (a method of providing a surface of a structure with a protecting coating by coating a sheet on the structure), claims 89-90 (a structure applied with the method according to claims 81-88) and claim 91 (use of the method for anti-graffiti coating).

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

3.2 Method of protecting a structure against pollution and corrosion according to claims 77-78 (a structure covered with the article according to claim 73), claim 80 (use of the article for providing a surface with a coating protecting against pollution and corrosion), claim 81-88 (a method of providing a surface of a structure with a protecting coating by coating a sheet on the structure), claims 89-90 (a structure applied with the method according to claims 81-88) and claim 92 (use of the method for protecting against pollution and corrosion).

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.